

5232866



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D6104-005
Job Sheet 203056



Part No: D6104-005

Job Qty: 10 pcs

Part Name: Round Billet, 17-4



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 11/8/19

Job Tracking No:

Due Date: 12/4/19

Created By: Chantal Lavoie

Type: Stock

Description:

Note: DWG REV B

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard Setup Run Hrs Hrs	Workcenter/Supplier	Workcenter / Supplier Lead Time	Sign-off
100	Purchasing	10 pcs	12/4/19	0.00 0.00		Purchasing - 1		
						Purchasing - 2		
						Purchasing - 3		
110	Packaging 2-1 - Receive - B4B	10 pcs	12/4/19	0.00 0.00		Packaging 2 - 1 - B4B		
						Packaging 2 - 2 - B4B		
						Packaging 2 - 3 - B4B		
						Packaging 2 - 5 - B4B		
						Packaging 2 - 4 - B4B		
						Packaging 2 - 6 - B4B		
						Packaging 2 - 7 - B4B		
						Packaging 2 - 8 - B4B		
						Packaging 2 - 9 - B4B		
						Packaging 2 - 10 - B4B		
						Packaging 2 - 11 - B4B		
						Packaging 2 - 12 - B4B		
						Packaging 2 - 13 - B4B		
						Packaging 2 - 14 - B4B		
						Packaging 2 - 15 - B4B		
						Packaging 2 - 16 - B4B		
						Packaging 2 - 17 - B4B		
						Packaging 2 - 18 - B4B		
						Packaging 2 - 19 - B4B		
						Packaging 2 - 20 - B4B		
						Packaging 2 - 21 - B4B		
						Packaging 2 - 22 - B4B		
						Packaging 2 - 23 - B4B		
						Packaging 2 - 24 - B4B		
						Packaging 2 - 25 - B4B		
						Packaging 2 - 26 - B4B		
						Packaging 2 - 27 - B4B		
						Packaging 2 - 28 - B4B		

</



Container No: S232866



Part: D6104-005

Job No: 203056

Serial No/Batch: S232866

Revision:

Inspector:

Exp Date:

Instructions: Various STC's

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL.: 1 813 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Date: 11/18/19

Plex 11/8/19 7:50 AM Dart.Lavoie.Chantal

11/8/2019

[Dart Hawkesbury] Job Sheet - Lavoie, Chantal

120 QC 18	10 pcs	12/4/19	0.00 0.00	Packaging 2 - 29 - B4B	
				Packaging 2 - 30 - B4B	
				Packaging 2 - 31 - B4B	
				Packaging 2 - 32 - B4B	
				Packaging 2 - 33 - B4B	
				Packaging 2 - 34 - B4B	
				Packaging 2 - 35 - B4B	
				Packaging 2 - 36 - B4B	
				QC 18 - 12	
				QC 18 - 14	
130 Packaging 3-1 - Stock - B4B	10 pcs	12/4/19	0.00 0.00	QC 18 - 22	
				QC 18 - 25	
				QC 18 - 48	
				QC 18 - 58	
				QC 18 - 61	
				QC 18 - 9	
				QC 18 - 81	
				Packaging 3 - 1 - B4B	
				Packaging 3 - 2 - B4B	
				Packaging 3 - 3 - B4B	
140 QC 21 - SA	10 pcs	12/4/19	0.00 0.00	Packaging 3 - 4 - B4B	
				Packaging 3 - 5 - B4B	
				Packaging 3 - 6 - B4B	
				Packaging 3 - 7 - B4B	
				Packaging 3 - 8 - B4B	
				Packaging 3 - 9 - B4B	
				Packaging 3 - 10 - B4B	
				Packaging 3 - 11 - B4B	
				Packaging 3 - 12 - B4B	
				Packaging 3 - 13 - B4B	
140 QC 21 - SA	10 pcs	12/4/19	0.00 0.00	Packaging 3 - 14 - B4B	
				Packaging 3 - 15 - B4B	
				Packaging 3 - 16 - B4B	
				Packaging 3 - 17 - B4B	
				Packaging 3 - 18 - B4B	
				Packaging 3 - 19 - B4B	
				Packaging 3 - 20 - B4B	
				Packaging 3 - 21 - B4B	
				Packaging 3 - 22 - B4B	
				Packaging 3 - 23 - B4B	
140 QC 21 - SA	10 pcs	12/4/19	0.00 0.00	Packaging 3 - 24 - B4B	
				Packaging 3 - 25 - B4B	
				Packaging 3 - 26 - B4B	
				Packaging 3 - 27 - B4B	
				Packaging 3 - 28 - B4B	
				Packaging 3 - 29 - B4B	
				Packaging 3 - 30 - B4B	
				Packaging 3 - 31 - B4B	
				Packaging 3 - 32 - B4B	
				Packaging 3 - 33 - B4B	
140 QC 21 - SA	10 pcs	12/4/19	0.00 0.00	Packaging 3 - 34 - B4B	
				Packaging 3 - 35 - B4B	
				Packaging 3 - 36 - B4B	
				QC 21 - SA - 21	
				QC 21 - SA - 70	
				QC 21 - SA - 53	

DAS
81
9-89

NOV 18 2019

DAS NOV 22 '19

DAS
21
9-89

NOV 22 2019

NOV 22 2019

Part Op 100 - (Purchasing) Issue P/O: _____ b) Ø4.00" x 5.10" long d) Material: 17-4PH Stainless Steel
 Descriptions: Aisl 630)
 110 - (Receive & Inspect for Damage & Mat'l Certs) Ensure material certification is attached

Plex 11/8/19 7:50 AM Dart.Lavoie.Chantal

11/8/2019

[Dart Hawkesbury] Job Sheet - Lavoie, Chantal

120 - (QC18 In-Coming Inspection Material) Ensure Material certification comply to Dwg D6104
130 - (Identify as per dwg & Stock Location: _____) LOCATION: MAT043
140 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D6104-005P	17-4 SS Roundbar 4.00"Od	10 pcs (1 ea)	100-Purchasing	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Purchasing	D6104-005P	10	0	0

Part Specifications

Specifications could not be found.

Plex 11/8/19 7:50 AM Dart.Lavoie.Chantal

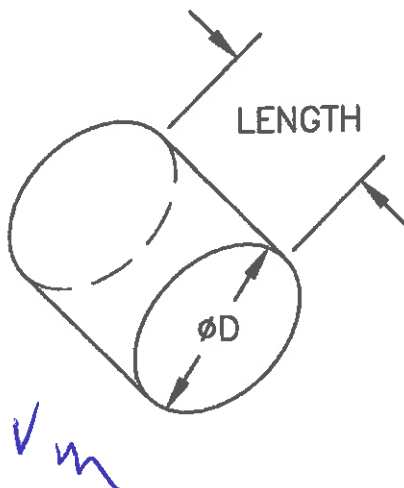


DESIGN 74	DRAWN BY 	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED 	APPROVED 	DRAWING NO. D6104	Rev. B SHEET 1 OF 1
DATE 02.11.25		TITLE ROUND BILLET, 17-4	SCALE NTS
A	01.04.10	NEW ISSUE	
B	02.11.25	CLARIFY ALLOY SPEC ADDED D6104-009/-011 REDUCE LENGTH OF BILLETS	

RELEASED

02.11.29

SPECIFICATION CONTROL DRAWING



MATERIAL: 17-4 PH SS (AMS 5643 OR AISI 630) MIN UTS = 170 KSI (38 HRc)

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, DIAMETER x LENGTH (+0.030/-0.000) AS SHOWN.

TOLERANCE ON ALL DIMENSIONS IS +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES

Part No.	Alloy	D (Diameter)	Length
D6104-001	17-4 PH STAINLESS STEEL	Ø3.00	3.80
D6104-003	17-4 PH STAINLESS STEEL	Ø3.25	3.80
D6104-005	17-4 PH STAINLESS STEEL	Ø4.00	5.10
D6104-007	17-4 PH STAINLESS STEEL	Ø4.50	5.10
D6104-009	17-4 PH STAINLESS STEEL	Ø5.25	4.10
D6104-011	17-4 PH STAINLESS STEEL	Ø6.50	4.10

Copyright © 2001 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER POHB045044



Supplier: MEC002-VU
Metaux Castle
P.O. Box 4090 Stn A
Toronto
ON
M5W OE9 Canada

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: POHB045044

PO Date: 11/8/19

Due Date: 12/3/19

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Lavoie, Chantal
Phone: 613-623-5200 Ext: 242
Fax: 613-632-1053
clavoie@dartaero.com

Via: Ground

Pymt Terms: Net 60

Freight Terms:

Special Comments:

NOV 11 2019

Items

Line Item	Job	Part	Drawing	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1	203024	D6101-007P	D6102	72743	7075-T7351 8.25X7.75X2.5 : Various STC's AS PER DWG D6101 REV. B MATERIAL: 7075-T7351 (QQ-A-250/12) SIZE: 7.750" X 8.250" X 2.50" THICK GRAIN DIRECTION ALONG: 7.750" LENGTH TOLERANCE AS PER QUOTE +.030"/-.000"	Firmed	-	12/3/19	30 pcs	0 pcs	30 pcs	\$61.72/pcs	\$1,851.60
2	203056	D6104-005P	D6202		17-4 SS Roundbar 4.00"Od : Various STC's AS PER DWG D6104 REV. B MATERIAL: 17-4 PH AS PER AMS 4843 OR AISI 630 SIZE: 4.00" X 5.10" LONG	Firmed	-	12/3/19	10 pcs	0 pcs	10 pcs	\$54.20/pcs	\$542.00
Grand Total:													\$2,393.60



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

POHB045044



Order Notes

Procurement Quality Clauses

A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable). No Raw Metals from China or Soviet Bloc Countries. (DFARS)
A026 certification of material conformance
A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program.

A049 supplier awareness.

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 11/8/19 10:43 AM Dart.Lavoie.Chantal



Castle Metals®

A. M. Castle & Co.

PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Page 1 of 2

Shipment No:4039395

Ship From: A. M. CASTLE & CO. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7 CAN		Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		Ship To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN		Deliver To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
Date Shipped 13-NOV-19	Inco Terms FCA HAWKESBURY ON CAN	Freight Terms Prepay & Add		Carrier LOCAL_FLEET	BOL No 4039395-3		

Shipment Details	Final Destination Branch - TOR
-------------------------	---------------------------------------

Order No 5652361	Line No 2	Item No 42464.MO	Description 4.0000.RD.17CR-4NI.STAINLESS.RT.SOL TR.COND A.132.0000-156.0000 CUT TO 5.1 IN (+ .1250/-0.000 IN) - BAND SAW CUTTING SPECIFICATIONS AMS 5643 <i>605</i>				
Purchase Order No POHB045044		Part Number YOUR ITEM NUMBER: D6104-005	Ordered Qty 10.00 PCS	Invoice Qty 10.00 PCS			
Details ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #S Email P/s and certs to: clavoie@dartaero.com END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS							
Delivery No. 122982791	Mill NORTH AMERICAN STAINLESS	Heat Number  891K <i>Um</i>	Mech Id	PCS 10	Width (IN)	Length (IN)	Shipped Qty(LBS) 187.2907

These items are controlled by the U.S. Government and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be resold, transferred, or otherwise disposed of, to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. Government or as otherwise authorized by U.S. law and regulations.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description.



PACKING SLIP/
CERTIFICATE OF CONFORMANCE

A. M. Castle & Co.

Page 2 of 2

Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the date of receipt. Material cut to the correct size, or replaced by the customer cannot be returned for credit.	
Reviewed by Authorized Castle Metals Representative:	Date: NOV 13 2019





North American Stainless Canada Inc.
740 Imperial Road North
Guelph, ON N1K1Z3
Canada

METALLURGICAL TEST REPORT

6870 Highway 42 East
Ghent, KY 41045-9615
(502) 347-6000

Certificate: 511302 1

Mail To:

CASTLE METALS
2150 ARGENTIA ROAD
MISSISSAUGA, ON L5N 2K7

Ship To:

CASTLE METALS
2150 ARGENTIA ROAD
MISSISSAUGA, ON L5N 2K7

Date: 5/27/2019 Page: 1

Steel: 630(17-4)

Finish: HR

Corrosion:

Red Ratio: 4.7 :1

Your Order: 44544

NAS Order: PN 0103523 01 Heat Treat Code: S2,156

PRODUCT DESCRIPTION:

Round Bar, Hot Rolled, Annealed, Rough Turned
UNS S17400; EN 10204 3.1, ASTM A484/18, MACRO OK, AMS 5643/V
ASTM A564/13e1, AMS 2303/P, ASME SA564/13, ASTM F899/12B
SOL. ANNEALED @ 1900F MIN FOR 1 HR MIN. AND AIR COOLED TO RT
UT PER API6A PSL3, ASTM A388/S1 CRITERIA, UT PASSED
H900 MECH. PROPERTIES ARE CAPABILITY ONLY*

REMARKS:

COMPLIES W/REQUIREMENTS OF DPAF 252.225-7009 EU DIRECTIVE
2011/65/EU. ROHS. EAF+AOD+CC. NO WELD REPAIR. MELTED AND MFG
IN USA FREE FROM MERCURY AND LOW MELTING ALLOY CONTAMINATION

Product Id	Skid #	Diameter	Size	Weight	-----Length-----	Mark	Pieces	Commodity Code
BK3872 8		4.0000		1,014	144.00	2	1	

CHEMICAL ANALYSIS CM(Country of Melt) ES(Spain) US(United States) ZA(South Africa) JP(Japan) ANAB, ISO/IEC 17025, Certificate# L2323
Chemical Analysis per ASTM A751/14a

NAS-Heat	CM	C %	CB %	CO %	CR %	CU %	MN %	MO %	N %	NI %
891K	US	.018	.218	.06	15.15	3.29	.79	.040	.016	4.34
P %	S %	SI %	TA %	TI %						
	.019	.0156	.66	.0050	.0020					

MECHANICAL PROPERTIES

Product Id	1 d o i c z	HB	No.	Grain	No.	Ferrite	%	TS-900CAP KSI	YS-900CAP KSI	EL-900CAP % 4D	RA-900CAP %	RC-900CAP No.	FREQ. No.
BK3872 8	RL	341.0	6.0	1.17	198.25	173.64	12.10	40.40	40.5	.21			



NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS.

Technical
Dept. Mgr.
KRIS LARK

5/27/2019



North American Stainless Canada Inc.
740 Imperial Road North
Guelph, ON N1K1Z3
Canada

METALLURGICAL TEST REPORT

6870 Highway 42 East
Ghent, KY 41045-9615
(502) 347-6000

Certificate: 511302 1

Mail To:

CASTLE METALS
2150 ARGENTIA ROAD
MISSISSAUGA, ON L5N 2K7

Ship To:

CASTLE METALS
2150 ARGENTIA ROAD
MISSISSAUGA, ON L5N 2K7

Date: 5/27/2019 Page: 2

Customer: 007209 001

CASTLE METALS
2150 ARGENTIA ROAD
MISSISSAUGA, ON L5N 2K7

Steel: 630(17-4)

Finish: HR

Your Order: 44544

NAS Order: PN 0103523 01

Heat Treat Code: 52,166

Corrosion:

Red Ratio: 4.7 :1

PRODUCT DESCRIPTION:

Round Bar, Hot Rolled, Annealed, Rough Turned
UNS S17400; EN 10204 3.1, ASTM A484/18, MACRO OK, AMS 5643/V
ASTM A564/13e1, AMS 2303/F, ASME SA564/13, ASTM F899-425
SOL. ANNEALED @ 1900F MIN FOR 1 HR MIN. AND AIR COOLED TO RT
UT PER API6A PSL3, ASTM A388/S1 CRITERIA, UT PASSED
H900 MECH. PROPERTIES ARE CAPABILITY ONLY*

REMARKS:

COMPLIES W/REQUIREMENTS OF DPAR 252.225-7009 EU DIRECTIVE
2011/65/EU, ROHS. EAP+AOD+CC. NO WELD REPAIR. MELTED AND MFG
IN USA FREE FROM MERCURY AND LOW MELTING ALLOY CONTAMINATION

Product Id	Skid #	Diameter	Size	Weight	Length-----	Mark	Pieces	Commodity Code
BK3872 8		4.0000		1,014	144.00	2	1	

CHEMICAL ANALYSIS CM(Country of Melt) ES(Spain) US(United States) ZA(South Africa) JP(Japan) ANAB, ISO/IEC 17025, Certificate# L23223
Chemical Analysis per ASTM A751/14a

NAS Heat

CM

US

MECHANICAL PROPERTIES

Product Id	Id o f c r	SEV. No.
BK3872 8	RL	.12



NAS hereby certifies that the analysis on this certification is correct. Based upon the results and the accuracy of the test methods used, the material meets the specifications stated. These results relate only to the items tested and this report cannot be reproduced, except in its entirety, without the written approval of NAS.

Technical
Dept. Mgr.

KRIS LARK

5/27/2019

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: D6104-00SP

PO / BATCH NO.: POHB045044/

DATE: 19/11/18

5232856

MATERIAL CERT REC'D: YES

THICKNESS ORDERED: Ø4.00 X 5.100

QUANTITY RECEIVED: 10 PLS

THICKNESS RECEIVED: Ø4.00 X 5.100

QUANTITY INSPECTED: 10 PLS

SHEET SIZE ORDERED: —

QUANTITY REJECTED: 0

SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y ☒ N ☐	
CORRECT FINISH	☒ Y ☐ N	
CORROSION	Y ☒ N ☐	
CORRECT GRAIN DIRECTION	☒ Y ☐ N	
CORRECT MATERIAL PER M-DRAWING	☒ Y ☐ N	AMS 3643
CORRECT THICKNESS	☒ Y ☐ N	
PHOTO REQUIRED	Y ☒ N ☐	
CORRECT REF # TO LINK CERT	☒ Y ☐ N	H/T 89/K
CORRECT MATERIAL IDENTIFICATION	☒ Y ☐ N	
CORRECT M# ON THE MATERIAL	☒ Y ☐ N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y ☒ N ☐	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y ☒ N ☐	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK.
RECORD RESULTS BELOW

	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION

ENGINEERING SIGNOFF (if required)

INSPECTED BY: [Signature]

SIGNED OFF BY: —

DATE: 19/11/18

DAS
81
9-89

DATE: —

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in